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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/810,256

03/26/2004

Olga E. Shmakova-Lindeman

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06/25/2007

NALCO COMPANY

1601 W. DIEHL ROAD

NAPERVILLE, IL 60563-1198

EXAMINER

MOORE, MARGARET G

ART UNIT

PAPER NUMBER

1712

MAIL DATE

DELIVERY MODE

06/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/810,256	<b>Applicant(s)</b> SHMAKOVA-LINDEMAN, OLGA E.	
	<b>Examiner</b> Margaret G. Moore	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 to 28 is/are pending in the application.
- 4a) Of the above claim(s) 22 to 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 to 4, 6, 8 to 10, 17 to 21 is/are rejected.
- 7) ☒ Claim(s) 5, 7, 11-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/12/07 has been entered.

2. Initially the Examiner notes that the claims are limited by the language "consisting of" in combination with the specific monomers found in (c). This is noted because the Examiner found teachings of copolymers containing (a), (b) and (c) in addition other monomers not embraced by (c) such as (meth)acrylic acid or hydroxyl ethyl methacrylate. Such additional monomers are excluded by the consisting of language.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 17 and 19 to 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Oude Alink et al.

Column 9 in Oude Alink et al. discloses various vinyl pyrrolidone-acrylic ester type resins. Vinyl pyrrolidone meets the vinyl cycloalkyl monomers in (c) since the cycloalkyl includes heterocyclic rings. See Ex. 3, which contains 15 wt% vinyl

pyrrolidone and a combination of dodecyl methacrylate and butyl acrylate. Also see Example 7 which contains 5 wt% vinyl pyrrolidone, dodecyl methacrylate and ethyl acrylate. These examples meet the claimed polymer. The bottom of column 10 through column 11 teaches a solvent and amounts meeting claims 17, 19 and 20. Note that this is used as a fuel additive, so it will have to be liquid at a temperature of 0°C to be functional.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oude Alink et al.

While the working examples prepare polymers of a higher molecular weight than that claimed, please see column 8, lines 13 to 16, which teaches a molecular weight range which overlaps with that claimed. Since patentees specifically teach molecular weights that fall within the claimed range, such as 50,000 and 100,000, one having ordinary skill in the art would have found a polymer having a molecular weight range within that disclosed to have been obvious.

7. Claims 1, 2 and 17 to 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Liesen et al.

Liesen et al. teach (meth)acrylate copolymer dispersants. See column 1, lines 53 and on. In this copolymer, the (A) units correspond to (b) as claimed and the (C) units correspond to (c) as claimed. These units are also present in the same amounts as claimed. The (B) units in Liesen et al. are described as (meth)acrylates having C<sub>10</sub> to C<sub>15</sub> alkyl groups. These alkyl groups meet the wherein clause at the end of claim 1.

As is known in the art, the term (meth)acrylate is an abbreviated way of referencing both methacrylate and acrylate monomers. Thus, if fully written, the (B) monomer would be defined as a C<sub>10-15</sub> acrylate or a C<sub>10-15</sub> methacrylate. In other words, one half of the choices for (B) in Liesen et al. meet the requirement of (a) and the "wherein" clause.

On one hand, one having ordinary skill in the art would have immediately envisioned C<sub>10-15</sub> alkyl acrylates from the definition of (B) in Liesen et al. in view of the

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limited selection of compounds embraced by (B). Again, note that half of the selection of (B) will result in a copolymer that anticipates the claimed.

If not anticipated, one having ordinary skill in the art would have found the claimed polymer obvious. Note, for instance, that the working examples use methacrylates such as lauryl methacrylate. As noted above, these long chain methacrylates are used as functional equivalents and in the alternative to acrylates. As such one having ordinary skill in the art would have been motivated to replace the lauryl methacrylate in Table 1 with lauryl acrylate. In this manner the instant claims are rendered obvious.

For claim 2, see column 3, lines 64 and 65.

For claims 17 and 18, note column 2, lines 50 and on, which teaches that the polymer can be prepared as an aqueous emulsion or in a solvent.

For claims 19 and 20, please see column 3, lines 50 to 55. Note that Table 3 tests these compositions at  $-40^{\circ}\text{C}$ .

8. Claims 3, 4, 6, 8 to 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liesen et al.

For claim 3, note that column 2, lines 41 and 42, teaches the addition of minor amounts of styrene or vinyl acetate. Since the monomer (c) in the claims allows for "one or more", it allows for a combination of the methacrylamide and styrene or vinyl acetate as suggested by Liesen et al. In this manner claim 3 is rendered obvious.

For claims 4 and 15, note that this corresponds to the amount of (B) found in column 1, line 55. For claim 6, note that this corresponds to the amount of (A) as found column 1, line 53. For claim 8, note that this corresponds to the total amount of (C) as found on column 1, line 57 and the additional monomer found on column 2, lines 35 to 40.

9. The remaining references are cited as being of general interest. Montillier and Tugukuni et al. both teach acrylate copolymer but neither meets the specific components as claimed or could be considered to be closer to the claims than the references cited supra.

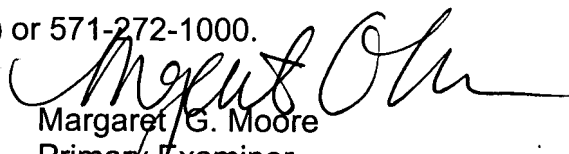
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10. Claims 5, 7 and 11 to 16 are objected to as being based upon a rejected base claim but containing limitations that are neither taught nor suggested by the prior art.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday and Wednesday to Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Margaret G. Moore  
Primary Examiner  
Art Unit 1712

mgm  
6/21/07